

Charting the path from self-reflection to self-appraisal in social anxiety:  
What are the roles of self-immersion and self-distancing?

by

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### **Author's Declaration**

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

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## Abstract

Past studies have suggested that individuals who adopt a *psychologically immersed*, as opposed to a *psychologically distanced* perspective when reflecting on negative emotional experiences, tend to experience greater negative affect and have more difficulty reappraising their experiences in an objective manner. Psychological distancing and immersion have not been studied systematically in socially anxious (SA) individuals, despite previous research showing that trait social anxiety is strongly associated with negatively biased appraisals of social experiences during self-reflection and post-event processing. The current study investigated the relationship between trait social anxiety, psychological immersion, and the cognitive and affective experiences of 76 participants while they engaged in a laboratory-based social task. Participants wrote about and reflected on a recent negative experience in which something they did or said in a social situation did not turn out the way they thought it should have. Thereafter, participants imagined an upcoming social interaction in which they believed they would be judged on their ability to impress a social partner. Participants were randomly assigned to one of two conditions in which they were instructed to self-reflect on these experiences in a distanced or immersed manner. Participants completed self-report measures of affect (*Positive and Negative Affect Schedule*), subjective distress (SUDS), cognitions (*Negative Self Portrayal Scale*), and psychological immersion (*Five Facets of Mindfulness Questionnaire*) at several time points during the study. Although there were no significant effects of condition in the primary analyses, secondary analyses demonstrated that psychological immersion was significantly correlated with higher negative and lower positive affect, and with greater self portrayal concerns (but only for the social anticipation task), accounting for unique

and significant variance in these outcomes, over and above the variance accounted for by trait SA. Moreover, there was a significant interaction between psychological distancing and SA status during the social anticipation self-reflection task, such that high SA participants experienced significantly greater negative affect than their low SA counterparts, but only at high levels of self-immersion. At low levels of self-immersion, both high and low SA participants reported comparatively low levels of negative affect. These results suggest that individual differences in psychological immersion and distancing may help to explain the circumstances under which self-reflection could have detrimental affective and cognitive consequences. In particular, high levels of self-immersion during self-reflection appear to interact with high levels of trait SA to drive negative emotional responses and beliefs within social contexts. Implications of these preliminary findings, their limitations, and ideas for future research are discussed within the context of cognitive behavioural models of SA.

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## **Introduction**

### **Cognitive models of social anxiety**

*Social Anxiety Disorder* (SAD) is characterized by fear of negative evaluation in social situations, leading to personal distress and dysfunction across a variety of life domains, often in large part because of socially anxious individuals' excessive avoidance of situations where social evaluation might occur. According to cognitive models of social anxiety (SA), upon entering an evaluative social situation, socially anxious individuals typically become hypervigilant to states of anxious arousal that are internally felt (e.g., heart rate) or externally visible (e.g., trembling, blushing), and fear negative evaluation by others who may perceive these signs of anxiety (Clark & Wells, 1995). For individuals with SAD, a discrepancy exists between the expectations they believe others have of them in social situations and their perceived abilities to meet those expectations (Rapee & Heimberg, 1997; Alden, Bieling & Wallace, 1994; Wallace & Alden, 1995).

A model of core fears in SAD has been developed by Moscovitch (2009) in an attempt to precisely identify those aspects of self that are perceived to be inadequate for those with the disorder. Perceptions of having inadequate social skills and personality, being physically unattractive, and being unable to control and conceal signs of anxiety are hypothesized to differentiate the heterogeneous presentation of this disorder. The *Negative Self Portrayal Scale* (NSPS; Moscovitch & Huyder, 2011) was developed in order to measure these fears in clinical samples. Psychometric analyses determined that the four fears proposed in the Moscovitch model (2009) exhibit a 3-factor solution among initial samples of undergraduate students completing the NSPS, with the fear of being socially unskilled and having a flawed personality tapping into the same construct on the NSPS,

which was labeled *social incompetence* (Moscovitch & Huyder, 2011). This factor structure was later replicated in clinical and community samples (Moscovitch et al., 2013)

Regardless of the precise aspect of concern, studies have shown that fear of negative evaluation leads high SA individuals to focus their attention inward and enact a variety of *safety behaviours*, or strategies designed to attenuate the distressing emotional experience itself or to conceal their heightened state of anxiety from others (McManus, Sacadura, & Clark, 2008). Socially anxious individuals tend to adopt an observer's perspective (i.e., that of their social partner) during social encounters, resulting in the perception that one's anxious arousal is transparent to others. Partly due to the idiosyncratic mental representations of the self in SA, afflicted individuals overestimate the extent to which their anxiety is visible to others, and the probability that others will judge them negatively for exhibiting anxiety (Clark & Wells, 1995). Indeed, studies examining self and observer appraisals have generally concluded that individuals with SAD exaggerate the perceived visibility of their anxiety and negativity of their social performance relative to ratings provided by objective observers (Norton & Hope, 2001; Rapee & Lim, 1992). Moreover, high SA individuals' distorted self-appraisals have been found to worsen as perceived standards of social performance become heightened or remain ambiguous in laboratory tasks, in comparison to when these standards are perceived as being low (Moscovitch & Hofmann, 2007). In short, SA individuals believe that the way they *feel* during feared social interactions must reflect the way they *appear* to others (Papageorgiou & Wells, 2002), and because what they *feel* is often personally deemed as being unacceptable to social evaluators, their tendency is to conceal outward expressions of anxious internal states in many kinds of evaluative social situations. Thus,

although negative self-appraisals are implicated in biased performance judgments, the context of the social interaction and, more specifically, perceived audience standards may moderate the nature of such judgments (Wallace & Alden, 1997; Moscovitch & Hofmann, 2007).

### **Negative biases in future- and past-oriented information processing**

As reviewed above, the lens through which socially anxious individuals process incoming social information tends to be fundamentally distorted by their negative self-views. As a result, self-critical beliefs are rarely challenged but, rather, tend to become strengthened over time, thereby perpetuating maladaptive cognitive, behavioural, and emotional responses to social events as they arise (see Hofmann, 2007), and negatively impact both their expectations of future social events and their memories of past encounters (Chiupka, Moscovitch, & Bielak, 2012).

*Anticipatory anxiety* is a form of future-oriented worry, consisting of preparations for upcoming feared situations in which socially anxious individuals tend to ruminate about, and become fixated on, ways to escape or avoid a feared situation, or otherwise cope with upcoming social threat in a manner that might prevent their imagined catastrophic outcomes from occurring (e.g., via self-concealment efforts; see Moscovitch, 2009; Moscovitch et al., 2013). Experimental studies have shown that while anticipating social threat, socially anxious individuals generate more negative images of themselves from an observer perspective and experience more anticipatory anxiety than nonanxious controls (Hinrichsen & Clark, 2003); unlike such controls, however, they do not also typically retrieve positive views of themselves that help to mitigate anxious reactions and catastrophic thinking in preparation of social encounters (Vassilopoulos, 2008).

Socially anxious individuals' processing of past-oriented information also tends to be negatively skewed, as illustrated by research that has investigated autobiographical images and memories in high versus low socially anxious participants. As reviewed by Morgan (2010), autobiographical memories are products of iterative reconstructions of past events, melding bottom-up encoding of new experiences with top-down processes that organize such experiences in light of existing beliefs about the self. For individuals with SAD, negative social experiences tend to be salient and more easily remembered because they are compatible with individuals' existing self-schemas. Studies have shown that compared with nonanxious controls, high SA individuals retrieve more negative than positive self-images during social situations and that these images are often derived from autobiographical memories of negative social experiences (Moscovitch, Gavric, Merrifield, Bielak, & Moscovitch, 2011). Additionally, socially anxious participants are able to access fewer *positive* autobiographical images which contain less elaborate episodic detail relative to controls (Moscovitch et al., 2011). Experimental studies have shown that simply instructing high SA individuals to hold a positive image of themselves in mind during social situations results in improved state self-esteem, suggesting that although positive self-imagery may be inherently less accessible to socially anxious individuals, they may be capable of retrieving such images with explicit effort and guided instruction (Stopa, Brown & Hirsch, 2012).

Individuals with SAD have also been found to use more self-referential words and make fewer references to others in written autobiographical memory narratives, suggesting perhaps that self-focused attention influences memory consolidation (Anderson, Goldin, Kurita & Gross, 2008). Similarly, they tend to recall more self-

referential memories (e.g., their own cognitions and behaviour, from an observer's perspective) (Morgan, 2010). Finally, high SA individuals also differ from nonanxious controls in the meaning they attribute to past negative social events. For example, in comparison to controls, high SA individuals appraise both their own past social blunders and imagined hypothetical blunders as being more embarrassing, shameful, more likely to elicit negative responses from others, and more socially costly (Moscovitch, Rodebaugh, & Hesch, 2012).

*Rumination* – excessive and maladaptive reflection upon negative emotional experiences – is implicated in a wide variety of emotional disorders, including SAD. It is associated with increases in symptoms of anxiety and depression, and aggravates negative fixation on emotional problems (Nolen-Hoeksema, Wisco, & Lyubomirsky, 2008). In SAD specifically, rumination is a pervasive problem referred to as *post event processing* (PEP), a form of maladaptive problem-solving consisting of the repetitive mental “replaying” of past negative social events (Morgan & Benerjee, 2008), which exacerbates anxiety and negative beliefs about the self (Kocovski, Endler, Rector, & Flett, 2005). Even when socially anxious individuals are not able to pinpoint what, specifically, went *wrong* in a social situation, they often engage in *upward counterfactual thinking* (UCT) and ruminate over their perceived mistakes and how a particular social encounter could have gone better. Investigations of this phenomenon have conceptualized UCT as a form of problem solving intended to overcome a deficit or need through the function of a negative-feedback loop aimed towards achieving some elevated steady state (for example, an uncompromising positive appraisal of one's social performance ) (Epstude & Roese, 2008). Considering high SA individuals' sensitivity to the potential costs of violating social standards (Moscovitch,

Rodebaugh, & Hesch 2012), this form of self-reflection produces few limits on the negative appraisals that can be generated during the ruminative process.

Thus, the extant literature indicates quite clearly that SA is associated with maladaptive anticipatory (future-oriented) and ruminative (past-oriented) self-reflective information processing. These processes, in turn, reinforce negative self-critical beliefs, drive symptoms of social anxiety and distress in social situations, and promote avoidance of and withdrawal from social encounters.

### **Cognitive reappraisal of negative thoughts and beliefs in SAD**

Cognitive reappraisal has long been a central component of cognitive behavioural therapy (CBT) for SAD and is thought to be essential for helping patients learn to challenge and modify self-critical cognitions which, in turn, helps to down-regulate the associated negative effects on emotions and behaviour (Hofmann, Heering, Sawyer, & Asani, 2009). Reappraisal efforts may include, for example, helping individuals see that the likelihood and costs of negative evaluation as a result of a perceived social blunder are less extreme than they might initially believe.

Despite the successes of CBT as a “gold standard” intervention for SAD, many patients do not respond adequately even after a full course of treatment (see Moscovitch et al., 2012). In one recent study, 25 outpatients with a principal diagnosis of SAD were distinguished as either treatment responders or non-responders based on the symptom changes they exhibited (calculated according to the *reliable change index*; Jacobson & Truax, 1991) during a standardized 12-session course of group CBT. Although both groups – i.e., those ultimately classified as responders vs. nonresponders – began therapy with equivalent cognitive reappraisal (CR) skill sets, treatment responders reported significant

gains in their acquisition and use of such skills by mid-treatment, whereas non-responders did not; moreover, the extent to which individuals acquired and used CR skills from pre- to mid-treatment significantly predicted reductions in SA symptoms from pre- to post-treatment (Moscovitch et al., 2012).

While these findings suggest that the early acquisition of CR skills during CBT may be fundamental to full-length treatment success, they also raise an important empirical question: Why might treatment responders with SAD learn to acquire such skills successfully as a result of CBT, while non-responders do not, despite similar pretreatment demographic and diagnostic characteristics across the two groups and identical exposure to a “gold standard” treatment regimen? One possibility, which we began to test in the present study, is that before individuals with emotional difficulties or disorders can learn to adopt reappraisal techniques and challenge or modify the content of their cognitions, they must first learn to utilize *meta*-cognitive techniques that focus on altering their *relationship* with their own thoughts and beliefs. It is possible that there are significant individual differences in people’s abilities to use such techniques, even amongst clinical samples who do not receive formal instruction.

Meta-cognitive approaches can be conceptualized as pre-requisites to successful cognitive restructuring in cognitive-based (CB) therapies, especially during times of emotional distress, when latent negative schema are activated and more likely to be accessible for retrieval, as discussed by Brewin (2006) and others (e.g., Craske et al., 2008). Meta-cognitive processes have gained attention in recent studies that have attempted to operationalize and better understand the ways that individuals *think about* and relate to their own cognitions during self-reflection, and how such processes may

impact emotional outcomes. *Self-distancing* has emerged as one such meta-cognitive process.

### **Self distancing and emotion regulation**

The construct of self-distancing (SD) emerged from a theory of levels of psychological construals, which was originally developed by Trope and Liberman (2003), and later applied to psychological distancing (Trope & Liberman, 2010). They hypothesized that individuals could depart from a self-centered, “in-the-moment” perspective of their self, environment, and objects within that environment (operationalized as *low-level construals*), and adopt hypothetical present and future alternatives, as well as reconstructions of past events and what they represent about the self and others (operationalized as *high-level construals*). The implication of this theory is that individuals can presumably choose consciously to adopt either low or high level construals by either placing themselves into a *psychologically immersed* (PI) perspective, wherein their mental representations are immediate, present-oriented, and enmeshed with their sense of self, or opt to take a *psychologically distanced* (PD) perspective, in which their mental representations of themselves, others and the situation in which they are engaged are more removed (or distant) in time, space, or visual perspective.

Recently, Kross and Ayduk (2011) have conceptualized self-distancing (operationalized as a continuous variable with PD and PI lying on opposite extremes) as a construct that differentiates adaptive vs. maladaptive self-reflection. They argued that PD enhances the *reappraisal* of autobiographical memories, whereas PI enhances the *recounting* of such memories. Reappraisal of memories is hypothesized to enhance individuals’ positive affective and cognitive outcomes following self-reflection by allowing



them to re-evaluate negative experiences in ways that reduce their negative impact, which is often due to overvaluations of certain ideas over others. Conversely, the recounting of memories, theorized to be a product of PI, is thought to constrict focus during self-reflection, preventing individuals from taking a “big picture” view of autobiographical memories, focusing on their concrete and emotionally-laden characteristics instead. This latter form of self-reflection is akin to post-event processing, which is known to exacerbate emotional distress in socially anxious samples, as reviewed above. In Kross and Ayduk’s experimental studies, participants are typically asked to *visualize* personal experiences as reoccurring while viewing them either from their own eyes (the PI perspective), or from the perspective of a neutral observer, or a “fly on the wall” (the PD perspective). Ayduk and Kross (2010)-demonstrated that individuals who adopted the PD perspective, in comparison to individuals who adopted the PI perspective, experienced less emotional and physiological reactivity to negative events in the short term, and were able to buffer themselves from the experience of negative affect in the long-term.

Constructs akin to self-distancing have been introduced and investigated across several different areas of study within the field of clinical psychology, but they are all essentially analogous to one another in their descriptions of a common process. For example, Teasdale et al. (2002), as well as others, have written extensively about the process of *decentering*, in which individuals consciously shift their cognitive set in order to depart from personally identifying with negative events (e.g., memories, thoughts about the self, emotions, etc.) and, instead, to perceive them as basic products of the mind within a sea of one’s limited awareness. Similarly, *cognitive fusion* (Luoma & Hayes, 1999) is defined as the entanglement with evaluative thought, wherein the outcomes or

interpretations of an experience are based on personal, verbally-mediated attributions of that experience, occurring in the absence of recognition that such attributions are unique products of the particular frame of mind (*relational frame*) at which one has arbitrarily arrived (either consciously or unconsciously). This relational frame is constantly in flux, and is unknowable in some ways. Therefore, according to Luoma and Hayes (1999), although the verbally mediated attributions of events at times seem uncompromisingly true, they are, in fact, open to re-examination and disconfirmation through the process of cognitive restructuring, but only if cognitive defusion can be achieved. These various definitions for the perspective one adopts when self-reflecting can be grouped together as forms of *meta-cognitive awareness*, in that they involve the common process of consciously monitoring one's streams of cognitions, an awareness of that monitoring, an awareness of that awareness, and so on, without arrival at any particular "meaning" or "truth" behind the process, such that one maintains an objective distance from the cognitions and their meaning without becoming fused to them.

Commonalities between CBT and mindfulness-based treatment protocols in their focus on metacognitive processes have aided in bridging the gap between so-called second and third wave cognitive-behavioural therapies (Hofmann & Asmundson, 2008). Like other emotional disorders, SAD is characterized by negative thoughts/beliefs, images, memories, and other types of negative mental self-representations becoming easily accessible during times of negative emotionality. Despite the induction of new positive self-representations during CBT (for example, via successful implementation of cognitive restructuring, behavioural experiments, and similar techniques designed to challenge and modify negative self-schemas), Brewin's (2006) *retrieval competition hypothesis* states that

maladaptive schemas remain latent within individuals and are retrieved more readily than positive schema during negative mood states. Subsequently, CR during CBT is expected to be most effective at treating emotional disorders when it teaches individuals to develop alternative mental representations during times of heightened emotionality. Related to this, self-regulation of negative affect requires meta-cognitive awareness – the realization that one has entered a negative mood state and one’s mental representations of self are susceptible to the influence of latent negative schema. Proponents of CBT agree that in order to achieve meta-cognitive awareness, individuals must bring their experience into full view and “step back” from it, observing their thoughts without over-identifying with their meaning (Brewin, 2006). Psychological distancing is one method to “step back.” Thus, mindfulness approaches (including meta-cognitive awareness and self-distancing) have been suggested to ameliorate the *rigid* application of emotion regulation (ER) strategies by allowing individuals to reflect on the efficacy of their coping strategies and to consider using alternative methods.

One SA-specific hurdle to achieving this flexibility in using ER strategies pertains to socially anxious individuals’ high levels of self-focused attention during social encounters, which worsens their information processing biases (Baer, 2009). In SAD, fusion with the observer perspective during self-focused attention has been shown to activate “hot” fear-related cognitive networks (often containing maladaptive schema), leading to the use of entrenched and automatic action tendencies (e.g., avoidance and safety behaviours) to cope with intense emotion (Kross, Ayduk, & Mischel, 2005). As a consequence, low-level, concrete self-construals become potentiated at the consequence of higher-level self-construals. In such a state, conscious control of information processing is undermined by

the automaticity of the emotional control system, producing the maladaptive ER strategies exhibited by individuals with SAD. Self-focused attention, however, need not necessarily result in negative outcomes, and is sometimes a practiced strategy in certain forms of mindfulness meditations. Indeed, *negative* outcomes of self-focused attention, and their hypothesized relations to SAD, may be conceptualized, in part, as a product of psychological immersion. An immersed psychological perspective, involving low-level construals about the self, results in an inability to observe thoughts and emotions in a distanced manner, and *is* associated with negative outcomes, as reviewed above (Kross & Ayduk, 2011).

### **Research questions and hypotheses**

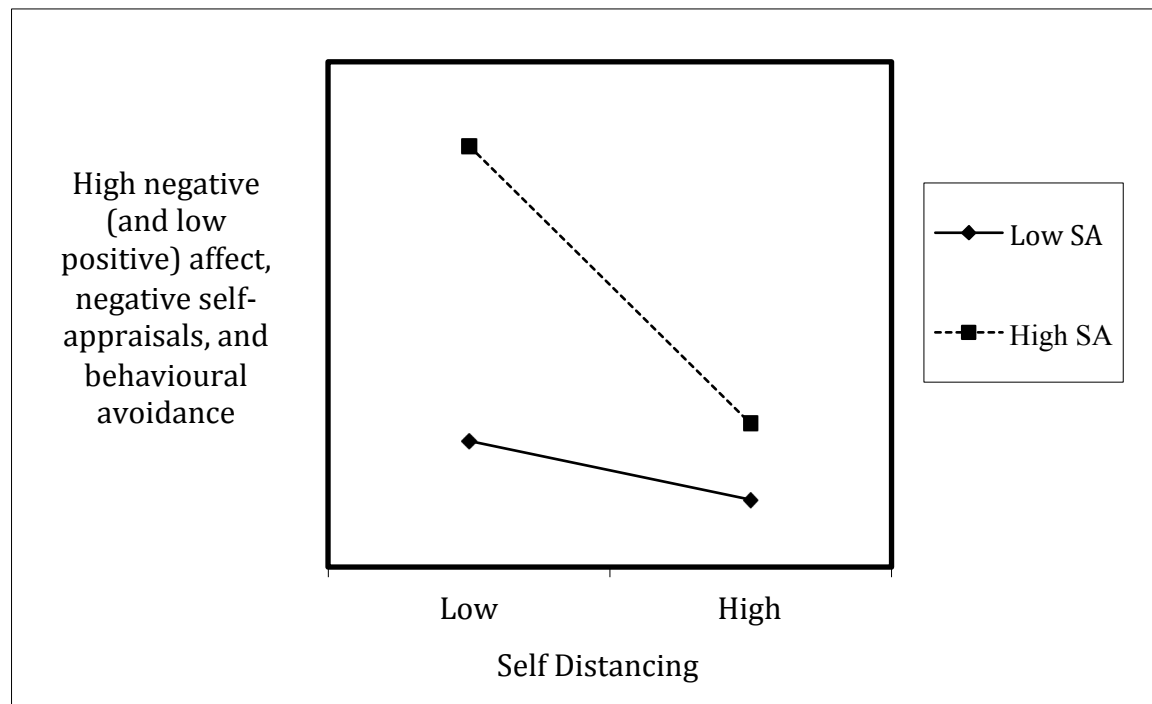
In the present experimental study, high vs. low socially anxious individuals were brought to the laboratory and instructed, first, to recollect a past social blunder and, subsequently, to anticipate an upcoming social interaction with an unfamiliar partner. Participants were randomly assigned to reflect on these past and future events in either a psychologically distanced or immersed manner. We wished to investigate (a) whether psychological distancing would promote more positive (or less negative) appraisals of past blunders relative to psychological immersion, and (b) whether high socially anxious individuals would show a potentiated response to the distancing or immersion instructions relative to their low socially anxious counterparts. To our knowledge, no previous studies have been conducted to examine these particular questions.

We predicted that both high and low socially anxious participants would report higher negative affect, lower positive affect, more negative cognitions about the self, and greater behavioural avoidance in the *psychologically immersed* experimental condition in

comparison to the *psychologically distanced* condition. Moreover, we hypothesized that among high socially anxious participants, those assigned to reflect in a self-immersed manner would exhibit disproportionally higher ratings of negative affect, more negative self-beliefs, and greater behavioural avoidance than those assigned to reflect in a self-distanced manner, in comparison to the effect of the experimental manipulation on low socially anxious participants. As such, we predicted that immersed, high socially anxious individuals would report the *most* negative affect, negative self-beliefs and behavioural avoidance, while distanced, low socially anxious individuals would report the *least*. These predictions are illustrated in Figure 1.

Figure 1

*Predicted levels of affect, cognitions and behavioural avoidance among high and low socially anxious participants within each experimental condition*



## Methods

### *Participants*

A total of 76 students were recruited from the University of Waterloo (UW) undergraduate subject pool and designated as high or low socially anxious using the *Social Phobia Inventory* (SPIN; Connor et al. 2000) in the manner described in the *Measures* section, below. Participants were compensated with course credit for participating in a 45-minute study. Participants completed the SPIN as well as a number of other questionnaires administered by UW researchers during *mass testing* at the start of the semester, and only individuals designated as “low” or “high” socially anxious were eligible to participate. Individuals who were invited to participate in the study were unaware of these specific eligibility criteria. Table 1 presents information on the demographic characteristics of the study sample.

Table 1. *Demographic Characteristics of the Study Sample (N=76)*

<b>Demographic Characteristics</b>	
<i>Age (mean/SD)</i>	20.6 (1.4)
<i>% Females</i>	64.5%
<i>Cultural or Ethnic Background (by percent)</i>	
Chinese	42.1%
Caucasian/White	17.1%
East Indian	7.9%

Korean	6.6%
Asian (other)	6.6%
Declined to answer	6.6%
Other	13.1%
<i>Marital Status (by percent)</i>	
Single	42.1%
Exclusively dating	30.3%
Causally dating	7.9%
Other	19.7%

### *Measures*

#### ***Social Phobia Inventory (SPIN; Connor et al. 2000)***

The SPIN is composed of 17-items that participants rate on a scale from 0 (“not at all”) to 4 (“extremely”). Items comprise ratings of fear, avoidance and discomfort in social situations, and are used to assess severity of social anxiety symptoms. Individuals with scores equal to or lower than 12 were designated as “low” socially anxious, and individuals with scores equal to or greater than 30 were designated as “high” socially anxious. These are accepted cutoff scores that have been used in previous studies for creating analogue samples of high and low SA participants (see Moscovitch, Rodebaugh, & Hesch, 2012). The SPIN has been shown to possess excellent psychometric properties, including high reliability and validity in measuring symptoms severity, and sensitivity to the effects of intervention (Antony, Coons, McCabe, Ashbaugh, & Swinson, 2006). In the present study, Cronbach’s alpha was 0.96. This measure is available for review in Appendix A.

### ***Positive and Negative Affect Schedule (PANAS; Watson, Clark & Tellegen, 1988)***

The PANAS is comprised of 10 items measuring current positive affect (PA) and 10 items measuring current negative affect (NA). Participants rated items such as “interested” or “upset” on a 5-point scale, ranging from 1 (“very slightly, or not at all”) to 5 (“extremely”). The PANAS is a widely used measure of state affect that has demonstrated very strong psychometric properties in previous studies (Tuccitto, Giacobbi, & Leite, 2010). Cronbach’s alpha for the PANAS ranged from 0.81 to 0.92 across its administration in the present study. This measure is available for review in Appendix B.

### ***Subjective Units of Distress Scale (SUDS)***

SUDS ratings were reported by participants alongside their PANAS ratings throughout the study. Participants rated how anxious they felt at various time points (described below) on a scale from 0 to 100, where 0 corresponds to “no anxiety at all” and 100 to “the greatest anxiety imaginable”. This measure is available for review in Appendix C.

### ***Negative Self-Portrayal Scale (NSPS; Moscovitch & Huyder, 2011)***

The NSPS is a 27-item instrument that measures several areas of self-portrayal concern common to social anxiety, rated on a scale from 1 (“not at all concerned”) to 5 (“extremely concerned”). Items correspond to three broad nonorthogonal factors of personal concern regarding, a) revealing signs of anxiety, b) appearing socially incompetent (including deficits in social skills and personality), and c) being physically unattractive. Three NSPS subscales can be derived from the items corresponding with each of the 3 factors, which can also be summed together to produce a total score. Total NSPS



scores were used in the present study. Scale developers reported that this measure demonstrates strong internal consistency and convergent validity. Cronbach's alpha values ranged from 0.91 to 0.96 in the present study. This measure is available for review in Appendix D.

***Nonreactivity to Inner Experiences subscale of the Five Facets of Mindfulness***

***Questionnaire (FFMQ;-Baer, Smith, Hopkins, Krietemeyer, & Toney, 2006)***

The FFMQ is a measure of one's general tendency to remain mindful in daily life. It has been applied to the measurement of the effects of mindfulness interventions, and their impact on well-being and symptom reduction in various psychological disorders, including anxiety. It has shown good internal consistency and strong concurrent validity with measures of emotional intelligence, thought suppression, and openness to experience, among other variables related to mindfulness (Baer et al., 2006). The *nonreactivity to inner experiences* factor of the FFMQ was administered in the present study. It is composed of 7 items that measure the extent to which individuals allow various thoughts and feelings to freely enter and leave awareness, without ruminating about their content or suppressing them (Baer, 2009). As such, this construct also corresponds with the conceptualization of *self-distancing* described in the Introduction above (for a review, see Kross & Ayduk, 2008). Ratings are made on a 5-point scale, from 1 ("never or very rarely true") to 5 ("very often or always true"), with the wording of items modified from the original scale to measure state (rather than trait) mindfulness during the experiment (e.g. "I [was able to] watch my feelings without getting lost in them"). Cronbach's alpha ranged from 0.87 to 0.88 in the present study. This measure is available for review in Appendix E.

***Visual Perspective (VP)***

On a 6-point scale, participants rated the visual perspective (VP) with which they viewed their past social blunder or imagined the upcoming social task. The scale ranged from -3 (“entirely looking through my own eyes”) to +3 (“entirely observing myself from an external point of view”). This measure is available for review in Appendix F.

### *Procedure*

Participants arriving to the lab were instructed to sit comfortably in a chair at a desk with a flat screen computer monitor and keyboard in front of them. An experimenter sitting next to the participants provided them with an overview of the experiment and then instructed them to complete an information and consent form approved by the UW Office of Research Ethics. Subsequently, participants provided baseline ratings on both the PANAS and SUDS scales.

The experimenter then instructed participants to recall a specific episodic memory of a recent social blunder they experienced which happened *at a particular time and place* and to rate from 0-100 how distressing it was for them. A blunder was defined as any recent social experience in which participants did or said something that did not go the way they would have liked. Only social blunders that elicited subjective distress ratings of 40 points or higher at the time of their occurrence were accepted by the experimenter. Participants who initially recalled a social blunder that elicited lower levels of distress were encouraged to think of another, more distressing example before proceeding. Participants then estimated the date of occurrence of their chosen blunder.

Next, participants completed a self-reflection exercise that was designed to resemble the experimental procedure and manipulation that has been used by Kross and Ayduk (2005, 2008) in their previous studies on self-distancing. Participants were

directed to face the computer screen where self-reflection instructions were visible. They were randomly assigned to reflect in either a *self-immersed* or *self-distanced* manner by use of a random number generator. In the **self-immersed condition**, participants were instructed to think and write about the past social blunder *as if they could see it happening through their own eyes, as if they had a first-person perspective of the experience* (see Appendix G). In the **self-distanced condition**, participants were instructed to think and write about the past social blunder *as if they could see it happening from the visual perspective of a fly on the wall, as if they had a third-person perspective of the experience* (see Appendix H). In each experimental condition, participants were provided with an example of how this perspective would be utilized if the experimenter were to reflect on a *non-social blunder*.

The self-reflection exercise was presented in three phases, each of which was timed, with two minutes allotted for the first phase and three minutes for phases 2 and 3. The computer was programmed to progress to the next phase automatically when time in each phase had elapsed. During the first phase, participants were simply instructed to concentrate on their reflection in a small, round standing mirror (positioned below the computer monitor and above the keyboard) while *bringing to mind* a past social blunder in a manner that was consistent with their experimental condition. The purpose of the mirror was to help elicit self-focused attention during self-reflection. In the second phase, participants were instructed to write about *what* happened during their recalled blunder. Finally, in phase 3, participants were instructed to analyze their feelings and write about the event in order to try to understand *why* it may have happened the way that it did.

During the self-reflection exercise, participants were left alone in the experimental room. They typed their narratives directly onto the computer screen.

Following this self-reflection exercise, participants provided a SUDS rating, and completed the PANAS, NSPS, the *non-reactivity* subscale of the FFMQ, and a VP rating. Participants were then given a three-minute rest, in which they were told to sit quietly and relax. They were then instructed to provide another set of ratings of the PANAS and SUDS.

Next, the experimenter returned and explained that in a few minutes, participants would be having a “first meeting” type of conversation with another student who was completing the same study in an adjacent room, after which they would both make evaluations of how positive an impression each made on the other (in reality, there was no other student and no interaction would actually be occurring). The experimenter then left the room, and participants completed the same 3-phase self-reflection exercise described above with instructions manipulated in a manner consistent with the same condition to which they had been randomized before (self-immersed vs. self-distanced; see Appendix I and Appendix J, respectively), but this time focusing on the upcoming interaction.

Following this exercise, participants completed the SUDS, the PANAS, NSPS, the *non-reactivity* subscale of the FFMQ, and a VP rating with respect to the anticipated interaction. Finally, they provided ratings of how much they were looking forward to the upcoming social task, and a rating of how much they were willing to go through with the upcoming social task (see Appendix K). Following this, the experimenter returned to explain that there would be no social interaction task and a full debriefing ensured. Any remaining questions about the study were answered, and the participation credit was administered.

## Results

### *Preliminary analyses*

An independent-samples *t*-test indicated that participants randomized to the two conditions did not differ in endorsed social anxiety symptoms on the SPIN ( $t(74) = -.26, p = .80$ ), the distress they experienced during the occurrence of their recalled social blunder ( $t(74) = .50, p = .62$ ), or in the reported length of time that had passed since the social blunder occurred ( $t(73) = .89, p = .38$ ).

Differences between low and high socially anxious participants were examined similarly, and indicated higher SPIN scores for the high socially anxious group ( $t(74) = -21.49, p < .001$ ), as expected. There were no group differences in the distress experienced during the occurrence of the social blunder ( $t(74) = -1.67, p = .10$ ), nor in the length of time elapsed since the event occurred ( $t(73) = 1.28, p = .21$ ). Mean and standard deviation values across the 4 cells are presented in Table 2.

Table 2. Mean and standard deviation values for high and low socially anxious (SA) participants across experimental conditions

	Immersed Condition			Distanced Condition		
Variable	SPIN	Blunder Distress	Blunder Occurrence (days past)	SPIN	Blunder Distress	Blunder Occurrence (days past)
Low SA	7.68 (3.22)	74.47 (8.48)	321.79 (651.90)	7.55 (7.01)	66.40 (9.33)	147.79 (180.98)
High SA	36.47 (6.85)	71.00 (8.85)	108.00 (113.83)	36.90 (6.08)	76.90 (11.17)	145.4 (199.77)

Note: Standard deviations in parentheses.

### Manipulation checks

The effect of the experimental manipulation comparing conditions collapsed across participants was examined by way of two independent-samples *t*-tests, first with the FFMQ non-reactivity subscale and then with VP as the outcome variable. If the manipulation worked as expected, participants assigned to the distanced condition should have reported higher scores (i.e., greater non-reactivity to inner experiences) on the FFMQ as well as greater third-person (“fly on the wall”) than first-person (“own eyes”) perspective-taking relative to those in the immersed condition. The *t*-tests were repeated separately for each of the experimental tasks (past blunder and upcoming interaction). Contrary to expectations, participants across the two conditions did not differ in their non-reactivity ratings on the FFMQ during either of the tasks ( $t(73) = 1.1, p = .26$ , and  $t(73)$

=1.0,  $p = .31$ , respectively). However, participants *did* report greater first-person perspective taking in the immersed condition and greater third-person perspective-taking in the distanced condition, across both tasks ( $t(68) = -2.01, p = .048$ , and  $t(64) = -4.5, p < .001$ , respectively), as expected. Means and standard deviations across the two conditions are provided in Table 3.

Table 3

*Examination of the effects of the experimental manipulation on FFMQ nonreactivity and visual point of view reported by participants across the two conditions*

	<b>Social blunder self-reflection</b>		<b>Social anticipation self-reflection</b>	
	<b>task</b>		<b>task</b>	
<b>Variable</b>	<i>Self-distancing<sup>a</sup></i>	<i>Point of view<sup>b</sup></i>	<i>Self-distancing<sup>a</sup></i>	<i>Point of view<sup>b</sup></i>
<b>Immersed Condition</b>	21.31 (6.25)	-0.74 (1.64)*	23.75 (6.21)	-1.00 (1.67)***
<b>Distanced Condition</b>	19.87 (4.57)	0.00(1.41)	22.39 (5.31)	0.72 (1.40)

<sup>a</sup>Higher values are indicative of greater nonreactivity to inner experiences (as measured by the FFMQ); <sup>b</sup>Negative values indicate a first-person perspective, whereas positive values denote a third-person perspective; \* $p < .05$ ; \*\*\* $p < .005$ .

#### *Primary analyses*

Separate 2 (between-subjects factor: SA group) x 2 (between-subjects factor: distanced vs. immersed condition) x 4 (within-subjects factor: time) mixed-model (i.e.,

repeated measures) ANOVAs were conducted on PANAS positive affect, negative affect, and SUDS ratings. A similar 2 x 2 x 2 mixed-model ANOVA was also conducted to examine the effects of SA group and condition on NSPS ratings at the two time points at which they were reported.

Results for positive affect (with the Greenhouse-Geisser correction applied for violation of the sphericity assumption) revealed only a significant main effect of time ( $F(2.63) = 25.74, p < .001$ ), indicating that PA values collapsed across groups and conditions fluctuated significantly over time.

Results for negative affect (with the Greenhouse-Geisser correction) also revealed a significant main effect of time ( $F(2.59) = 29.10, p < .001$ ). In addition, there was a significant between-subjects effect of SA group ( $F(1) = 18.47, p < .001$ ), with high SA participants reporting greater NA overall ( $M=18.85$  vs.  $13.78$ ), and this was further modified by a significant group x time interaction effect ( $F(2.59) = 4.86, p = .001$ ). Following up this interaction with independent-samples *t*-tests across each time point revealed higher levels of NA in the high SA group at all time points (all  $ts < -3.5$ , all  $ps < .001$ ) other than immediately following the 3-minute rest period ( $t(73) = -1.92, p = .061$ ).

Results for SUDS ratings (with the Greenhouse-Geisser correction) also revealed a significant main effect of time ( $F(2.415) = 21.53, p < .001$ ), with both quadratic and cubic functions significant at  $p < .005$ . In addition, there was a significant between-subjects effect of SA group ( $F(1) = 18.47, p < .001$ ), with high SA participants reporting greater SUDS ratings overall ( $M = 42.46$  vs.  $29.69$ ).

Results for NSPS ratings (with the Greenhouse-Geisser correction) also revealed a significant main effect of time ( $F(1) = 13.10, p < .001$ ), as well as a between-subjects effect



of SA group ( $F(1) = 28.27, p < .001$ ), with high SA participants reporting greater self-portrayal concerns following both blunder and social anticipation self reflection tasks ( $M(SD) = 67.5 (16.5)$  and  $M(SD) = 61.1 (21.6)$  in the high SA group, respectively, and  $M(SD) = 49.0 (16.4)$  and  $M(SD) = 40.7 (16.5)$  in the low SA group, respectively).

In summary, results across analyses revealed that there were no significant main or interactive effects of condition for any of the dependent variables examined (all  $F$ s  $< 1.30$ , all  $p$ s  $> .26$ , all partial eta squared values  $< .02$ ), thus failing to support our primary hypotheses for the affective and cognitive measures. Results also revealed no significant main or interactive effects of condition for any of the behavioural measures following the anticipation self-reflection task (all  $F$ s  $< 3.21$ , all  $p$ s  $> .08$ , all partial eta squared values  $< .04$ ), thus failing to support our primary hypothesis for the behavioural measures.

### *Secondary analyses*

To further explore the relation between SA and self-distancing, and how these variables might interact to affect relevant outcomes during social situations, secondary analyses were conducted. Specifically, hierarchical linear regression was used to examine the relation between SA group membership, FFMQ self-distancing scores, and cognitive, affective, and behavioural outcomes for all participants collapsed across experimental conditions. Various outcome variables were examined in separate analyses. For each analysis, predictor variables included centered scores on the nonreactivity subscale of the FFMQ and dummy-coded SA group membership (using the cutoff scores on the SPIN, as described above), which were entered in step 1, and the interaction term of these two predictors, which was entered in step 2. Analyses were conducted separately for each the two self-reflection tasks (recollected past blunder and anticipated upcoming interaction).

Results revealed several significant main effects in step 1. Specifically, greater self-immersion and high SA status each significantly predicted unique variance in PANAS negative affect (with  $\beta = .357, p = .001$  for SA status, and  $\beta = -.323, p < .001$  for self-immersion), and SUDS subjective distress (with  $\beta = .271, p = .016$  for SA status, and  $\beta = -.285, p = .012$  for self immersion) for the social blunder self reflection task. These variables explained 25.7% of the overall variance in negative affect and 16.2% of the variance in subjective distress. Similarly, for the social anticipation self-reflection tasks, there were main affects of negative affect (with  $\beta = .427, p < .001$  for SA status, and  $\beta = -.364, p < .001$  for self-immersion) and subjective distress (with  $\beta = .253, p = .034$  for SA status, and  $\beta = -.259, p = .030$  for self-immersion), with these variables explaining 40.2% of the overall variance in negative affect and 15.2% of the variance in subjective distress, respectively.

Self-immersion *and* SA status each also predicted unique variance in NSPS self-portrayal concerns ( $\beta = .427, p < .001$  for SA status, and  $\beta = -.364, p < .001$  for self immersion variables), explaining 31% of the variance in self portrayal concerns, but only during the *social anticipation task*. SA status but *not* self-immersion predicted unique variance in self-portrayal concerns during the social blunder self-reflection task ( $\beta = .47, p < .001$  vs.  $\beta = -.13, p = .22$ , respectively).

Greater self-immersion but *not* SA status predicted lower positive affect across both the social blunder ( $\beta = .31, p = .01$  vs.  $\beta = -.07, p = .53$ , respectively), and anticipation ( $\beta = .26, p = .03$  vs.  $\beta = -.12, p = .33$ , respectively) self-reflection tasks.

Finally, during the social anticipation task, self-immersion but *not* SA status was a significant predictor of how much participants looked forward to completing the social

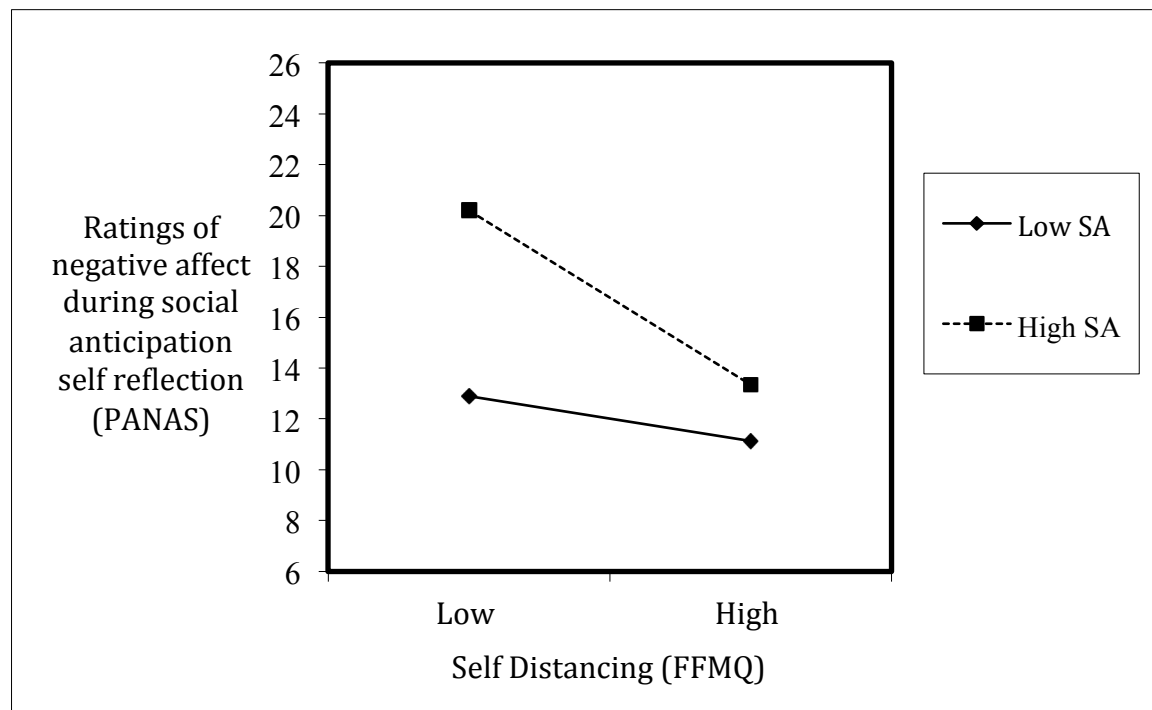
interaction task ( $\beta = .84, p < .001$  vs.  $\beta = .005, p = .94$ , respectively). Self-immersion *and* SA status (marginally) predicted the extent to which they were willing to go through with this part of the experiment ( $\beta = .243, p = .042$  and  $\beta = -.22, p = .074$ , respectively).

In step 2, self-immersion and SA group membership interacted significantly to predict negative affect in anticipation of the social interaction task ( $R^2$  of overall model  $= .461, p = .023$ ), but all other interactions were nonsignificant. The interaction term explained an additional 4.2% of the variance in this model over and above that explained by step 1 alone ( $p = .023$ ).

Simple slope analyses were conducted in order to examine the slope of the regression line associating negative affect and self-distancing within the high and low socially anxious groups at 1SD above and below the mean distancing score (as measured by the FFMQ). For low socially anxious participants, the slope of the regression line did not differ from zero ( $p = .25$ ), suggesting that negative affect did not vary at different levels of self-distancing for low anxious participants. Conversely, in high socially anxious participants, the regression line had a negative slope that was significantly different from 0 ( $p < .001$ ), suggesting that as self-distancing increased, negative affect decreased. This interaction is illustrated in Figure 2.

Figure 2

*The association between self-distancing and negative affect immediately following the social anticipation self reflection amongst high and low socially anxious participants. Greater self-distancing is equivalent to lower self-immersion.*



## Discussion

This study investigated the effects of self-distancing on affective, cognitive and behavioural outcomes during two self-reflection exercises in high vs. low socially anxious participants. Participants were randomly assigned to reflect on past and future social events in either a psychologically distanced or psychologically immersed manner. Unfortunately, the experimental manipulation did not differentially affect self-distancing during participants' self-reflections (on the FFMQ) across conditions in the expected or desired manner. However, there were significant differences between conditions in the expected directions in participants' reports of their visual point of view during self-

reflections. Participants who received distancing instructions tended to report a third-person perspective, while those who received immersing instructions reported a first-person perspective. These differences suggest that participants were attending to the instructions while completing their self-reflections because the instructions explicitly asked participants to adopt a third-person (“fly on the wall”) or first-person (“own eyes”) perspective, respectively, between the two conditions. Despite attending to the instructions, it is possible – given the nonsignificant FFMQ differences across conditions – that the self-distancing instructions were not internalized and utilized as predicted, which may have been one reason that there were no significant main or interactive effects of *experimental condition* in our primary analyses.

Although our experimental manipulation may not have worked to produce its intended effects on self-distancing, individual differences in self-distancing across participants in the study allowed for secondary analyses examining the relationship between distancing/immersion as a continuous variable, SA status, and self-appraisals, affect, and behaviour. In line with our hypothesis, greater self-immersion predicted higher levels of negative affect and subjective distress and lower levels of positive affect across both self-reflection tasks. These associations remained significant even after accounting for SA symptom severity, suggesting that psychological distancing helps to reduce negative affect and negative self-appraisals over and above the degree to which individuals endorse SA symptoms (such symptoms, we found, are also – as expected – independently related to these negative outcomes over and above the effects of self-distancing).

Participants in the present study reported the degree to which they looked forward to and were willing to participate in the social interaction task. As such, this measure

represents a face-valid measure of participants' *intended* behaviour. Results indicated that the more self-immersed participants were, the less likely they were to endorse looking forward to the social task. Even after accounting for SA symptoms, self-immersed participants reported less willingness to go through with the social task. This outcome suggests that over and above SA symptom severity, the extent to which individuals would be willing to approach a social situation is affected by the extent to which they are psychologically distanced. Thus, even amongst highly anxious individuals, a psychologically distanced perspective may be associated with more positive outcomes, both during post-event self-reflection and anticipatory processing of a socially threatening situation.

Regression analyses also demonstrated a significant interaction between self-distancing and SA status in predicting the experience of negative affect. Among high SA participants, negative affect increased linearly with increases in psychological immersion, while among the low SA participants, such a relation was not found, with low SA participants reporting equivalent levels of negative affect across levels of immersion/distancing. Thus, in high SA participants, negative affect appears to be related to self-distancing, while in low SA participants, it does not. Consequently, high SA individuals may benefit from adopting a psychologically distanced perspective in threat-relevant situations (i.e., self-reflection over past negative events and upcoming social interaction tasks), while low SA individuals may not. Thus, the benefits of adopting a distanced perspective during self-reflection may be *most* beneficial to individuals with higher levels of SA. However, the nature of this analysis reveals associations between these variables, and does not reveal whether one variable influences the other, or whether both

variables are simultaneously influenced by a third, unidentified variable. As such, causal conclusions cannot be inferred via this particular analysis.

To the extent that our results might generalize to a clinical sample of individuals with SAD vs. healthy controls, the variability in spontaneous self-distancing across our analogue sample of high and low SA participants suggests that even clinical samples might vary in their inherent abilities to be self-distanced or immersed. These differences are important, as our data support the view that within the context of self-reflection on social threat, psychological distancing is associated with more positive outcomes and psychological immersion with greater negative outcomes, over and above the contribution of SA symptoms alone. It cannot be determined from this study whether individuals who naturally distance themselves are protected against becoming immersed, or whether those who are naturally immersed will experience difficulty in becoming distanced. Future studies should investigate this relationship in clinical populations to determine if self-distancing may act as a protective factor in SAD, which may serve as a foundation that promotes and enhances individuals' ability to acquire and use adaptive ER skills during anxiety-provoking social situations.

A troubling limitation of the present study pertained to the results of the primary manipulation check, which suggested that the self-distancing manipulation may not have worked as intended. A possible confound may have been the cultural composition of our study sample, with almost half of our participants identifying as Chinese. Indeed, concepts and construals of self and their associated emotional and behavioural sequelae tend to differ significantly across cultures (e.g., Markus & Kitayama, 1991). Such differences may also extend to self-distancing and related metacognitive processes. For example, in one

recent study examining spontaneous self-distancing across a three-week period in Russians and Americans, it was found that Russians tended to be more self-distanced than Americans, which lead them to experience significantly less distress when reflecting upon negative experiences (Grossmann & Kross, 2010). Thus, it is quite possible that the cultural makeup of our sample inadvertently undermined our manipulation by introducing significant culture-related variance across participants' responses on our primary measures, which we did not anticipate or hypothesize from the outset.

Whereas our study investigated how *visual perspective* might influence self-appraisals and related outcomes in social anxiety, others have investigated how *temporal perspectives* might moderate self-appraisals generated under certain visual perspectives. For example, Libby, Eibach and Gilovich (2005) examined undergraduate students' own perceptions of the extent to which they had become more socially competent and less socially awkward since high school. It emerged that participants who adopted a third-person perspective (i.e., a psychologically distanced perspective) judged themselves as having become more socially skilled since high school in comparison to those who adopted a first-person perspective. Furthermore, participants who reported greater self-change also *behaved* more socially with a confederate than participants who reported less change since high school. However, this effect was also moderated, such that participants adopting a third-person perspective judged themselves as becoming more socially skilled over time specifically when they looked for evidence of *change*, in comparison to participants who sought evidence of *continuity*, for whom self-judgments of social skill development did not change as much. Related to this, a recent study investigating psychological distancing by Kross and colleagues showed that reductions in cigarette cravings could be induced by



instructing smokers to focus on long-term (as opposed to short-term) consequences of smoking, suggesting that manipulating temporal construals may produce the types of cognitive and behavioural effects that are hypothesized to be related to greater self-distancing (Kober, Kross, Mischel, Hart & Ochsner, 2010). Thus, it would be of interest to replicate and extend our own findings in future studies with experimental manipulations that focus on temporal self-distancing rather than distancing via visual perspectives per se. Indeed, there is already some indirect evidence to suggest that temporal distancing could be helpful for socially anxious individuals attempting to reappraise their negative perceptions of past autobiographical events. For example, efficacious imagery and memory rescripting interventions for social anxiety disorder are thought to achieve their powerful effects by helping to guide socially anxious patients to view their negative childhood memories through the eyes of a wiser and more compassionate “adult self,” thereby updating their appraised meanings (Nilsson, Lundh, & Viborg, 2012).

According to construal-level theory (Trope & Liberman, 2010) there are many levels of construals that can be manipulated in order to elicit psychological distance, including manipulating social distance (e.g. social power or ownership), hypotheticality (e.g., in the case of anticipation), novelty of experiences, and generalization from past experiences. In each case, the key to achieving greater psychological distance is departing from the “here and now,” a low-level construal which is concerned with immediate purposes (such as evading negative social evaluation in the case of SA), to higher-level construals that allow individual to transcend present-oriented mental constructions in order to imagine hypothetical “realities.” Thus, future studies should investigate the effects

of varied forms of immersion and distancing on self-appraisals, emotion, and behaviour in socially anxious individuals.

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## Appendix A

### SPIN

Please choose a number to indicate how much the following problems tend to bother you **in a typical week**. Choose only one number for each problem, and be sure to answer all items.

0 = Not at all  
1 = A little bit  
2 = Somewhat  
3 = Very much  
4 = Extremely

- |    |  |   |   |   |   |   |
|----|--|---|---|---|---|---|
| 1. | I am afraid of people in authority.  | 0 | 1 | 2 | 3 | 4 |
| 2. | I am bothered by blushing in front of people.                                | 0 | 1 | 2 | 3 | 4 |
| 3. | Parties and social events scare me.  | 0 | 1 | 2 | 3 | 4 |
| 4. | I avoid talking to people I don't know.                                      | 0 | 1 | 2 | 3 | 4 |
| 5. | Being criticized scares me a lot.  | 0 | 1 | 2 | 3 | 4 |
| 6. | Fear of embarrassment causes me to avoid doing things or speaking to people. | 0 | 1 | 2 | 3 | 4 |
| 7. | Sweating in front of people causes me distress.                              | 0 | 1 | 2 | 3 | 4 |
| 8. | I avoid going to parties.  | 0 | 1 | 2 | 3 | 4 |
| 9. | I avoid activities in which I am the center of attention.                    | 0 | 1 | 2 | 3 | 4 |

- |   |   |   |   |   |   |
|---|---|---|---|---|---|
| 10. Talking to strangers scares me.                               | 0 | 1 | 2 | 3 | 4 |
| 11. I avoid having to give speeches.                              | 0 | 1 | 2 | 3 | 4 |
| 12. I would do anything to avoid being criticized.                | 0 | 1 | 2 | 3 | 4 |
| 13. Heart palpitations bother me when I am around people.         | 0 | 1 | 2 | 3 | 4 |
| 14. I am afraid of doing things when people might be watching.    | 0 | 1 | 2 | 3 | 4 |
| 15. Being embarrassed or looking stupid are among my worst fears. | 0 | 1 | 2 | 3 | 4 |
| 16. I avoid speaking to anyone in authority.                      | 0 | 1 | 2 | 3 | 4 |
| 17. Trembling or shaking in front of others is distressing to me. | 0 | 1 | 2 | 3 | 4 |

## Appendix B

### PANAS

This scale consists of a number of words that describe different feelings and emotions. Read each item and then insert the appropriate answer (number) in the space next to that word. Indicate how you are feeling right now.

<b>1</b> <b>very slightly or</b> <b>extremely</b> <b>not at all</b>	<b>2</b> <b>a little</b>	<b>3</b> <b>moderately</b>	<b>4</b> <b>quite a bit</b>	<b>5</b>
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\_\_\_ 1. interested

\_\_\_ 11. irritable

\_\_\_ 2. distressed

\_\_\_ 12. alert

\_\_\_ 3. excited

\_\_\_ 13. ashamed

\_\_\_ 4. upset

\_\_\_ 14. inspired

\_\_\_ 5. strong

\_\_\_ 15. nervous

\_\_\_ 6. guilty

\_\_\_ 16. determined

\_\_\_ 7. scared

\_\_\_ 17. attentive

\_\_\_ 8. hostile

\_\_\_ 18. jittery

\_\_\_ 9. enthusiastic

\_\_\_ 19. active

\_\_\_ 10. proud

\_\_\_ 20. afraid

## **Appendix C**

### **SUDS**

Please indicate on a scale from 0 to 100 how anxious you feel right now, with 0 representing no anxiety and 100 representing the highest possible level of anxiety. Record your answer in the space provided below.

## Appendix D

### NSPS

According to the scale provided below, please write the number in the blank space beside each item to indicate the degree to which you were focused on feeling concerned about the following aspects of yourself when recalling your ***anxiety-provoking social situation***. Rate how concerned you felt today about each item while recalling the social experience you had in the past.

1 -----	2 -----	3 -----	4 -----	5 -----
Not at all concerned	Slightly concerned	Moderately concerned	Very concerned	Extremely concerned

***While recalling the anxiety-provoking social situation today, I felt concerned that the other person (or people) who were present in my memory noticed at the time of the event that I was:***

- \_\_\_ 1. stuttering
- \_\_\_ 2. poorly dressed
- \_\_\_ 3. boring
- \_\_\_ 4. sweating
- \_\_\_ 5. physically unattractive
- \_\_\_ 6. losing control of my emotions
- \_\_\_ 7. blushing
- \_\_\_ 8. speaking with a trembling voice
- \_\_\_ 9. blemished (i.e., my appearance)
- \_\_\_ 10. interpersonally ineffective
- \_\_\_ 11. weird-looking
- \_\_\_ 12. lacking personality
- \_\_\_ 13. fat
- \_\_\_ 14. unable to express myself
- \_\_\_ 15. twitching (i.e. my facial muscles)
- \_\_\_ 16. frozen
- \_\_\_ 17. humourless
- \_\_\_ 18. reserved

- \_\_\_ 19. aloof
- \_\_\_ 20. stupid
- \_\_\_ 21. socially awkward
- \_\_\_ 22. having a bad hair day
- \_\_\_ 23. speaking incoherently
- \_\_\_ 24. lacking social skills
- \_\_\_ 25. fidgeting
- \_\_\_ 26. unfashionable
- \_\_\_ 27. ugly

## Appendix E

### FFMQ

Please rate each of the following statements using the scale provided. Choose the number that best describes your own opinion of what was currently true for you during the self-reflection task you just completed.

1	2	3	4	5
Never or very rarely true	Rarely true	Sometimes true	Often true	Very often or always true

I perceived my feelings and emotions without having to react to them.

I watched my feelings without getting lost in them.

In thinking about these difficult situations, I was able to pause without immediately reacting.

When I was having distressing thoughts or images, I was able just to notice them without reacting.

When I had distressing thoughts or images, I felt calm soon after.

When I had distressing thoughts or images, I was able to “step back” and become aware of the thought or image without getting taken over by it.

When I had distressing thoughts or images, I was able to just notice them and let them go.



## Appendix F

### Visual Perspective Rating

Using this scale, please provide a rating of your perspective during the self-reflection exercise.

-3	-2	-1	0	+1	+2	+3
entirely looking out through my eyes					entirely observing myself from an external point of view	

## Appendix G

### Instructions for recalling a *past social blunder* from the *immersed perspective*

In a moment, I will ask you, while viewing your reflection in the mirror, to spend a couple minutes going back in your mind to the time and place of the negative social experience you told me about. Try to imagine yourself in the situation again, reliving the situation from the perspective of your past self, observing the event as it unfolds. So, try to watch the event occur as if it were happening to you all over again.

After you imagine the experience, spend a few minutes writing about **what** happened during that event, as you imagine yourself in the situation again. Try to view your past self and the situation you encountered as if event as happening to you all over again.

Finally, I will ask you to spend a few more minutes writing and analyzing your feelings about the event in order to try to understand **why** the event happened as it did, and **why** you may have felt the way you did. Please remember to stay in the perspective of recalling the memory as if it was happening to you all over again.

*Let me give you an example of a non-social blunder from my own life, just to give you a sense of what I mean. I can remember walking on my way to a class where I was scheduled to make a presentation. Midway through my walk, and already running late, I realized that I had left my thumb drive with the powerpoint presentation on it, and the handouts for the class on the kitchen counter back at home. I realized that there was no way for me to get the materials, and make it to class on time for the start of presentations, My anxiety was at the level of a 80 out of 100. So, if I were doing this self-reflection exercise for that example, I go back in my mind to that moment and then, keeping that scene in my memory very much in mind, try to envision my past self within that scene and reflect on what I (or "Dan") was thinking about and feeling, what "Dan" was experiencing and doing, and how "Dan" was behaving in those moments from "Dan's" perspective as the event was unfolding. Then, from that perspective, I would try to analyze why I/Dan was feeling anxious and behaving in those ways, and what may have been going on for me/Dan that led me to feel and behave like that. Of course, my example is taken from a time when I was alone, whereas yours will be a negative social experience.*

## Appendix H

### Instructions for recalling a *past social blunder* from the *distanced perspective*

In a moment, I will ask you, while viewing your reflection in the mirror, to spend a couple minutes going back in your mind to the time and place of the negative social experience you told me about. Try to imagine yourself in the situation again, reliving the situation from the perspective of your past self as if you are a “fly on the wall” observing the event as it unfolds. So, try to watch the event unfold as if it were happening all over again, but to the distant you, from the perspective of that fly on the wall.

After you imagine the experience, spend a few minutes writing about **what** happened during that event, as you imagine yourself in the situation again. Try to view your past self and the situation you encountered as if you are a “fly on the wall” observing the event as it unfolds. So, try to watch the event unfold as if it were happening all over again, but to the distant you.

Finally, spend a few more minutes writing and analyzing your feelings about the event in order to try to understand **why** the event happened as it did, and **why** you may have felt the way you did. Please remember to stay in the perspective of a “fly on the wall” as you do this.

*Let me give you an example of a non-social blunder from my own life, just to give you a sense of what I mean. I can remember walking on my way to a class where I was scheduled to make a presentation. Midway through my walk, and already running late, I realized that I had left my thumb drive with the powerpoint presentation on it, and the handouts for the class on the kitchen counter back at home. I realized that there was no way for me to get the materials, and make it to class on time for the start of presentations, My anxiety was at the level of a 80 out of 100. So, if I were doing this self-reflection exercise for that example, I go back in my mind to that moment and then, keeping that scene in my memory very much in mind, try to step a bit away from myself within that scene and reflect on what I (or “Dan”) was thinking about and feeling, what “Dan” was experiencing and doing, and how “Dan” was behaving in those moments from the perspective of a more distant “fly on the wall” who may have been observing Dan as he went through this experience. Then, from that perspective, I would try to analyze why I/Dan was feeling anxious and behaving in those ways, and what may have been going on for me/Dan that led me to feel and behave like that. Of course, my example is taken from a time when I was alone, whereas yours will be a negative social experience.*

## Appendix I

### **Instructions for reflecting on the *upcoming social task* from the *immersed perspective***

In the upcoming task, while viewing your reflection in the mirror, try to imagine the details of the upcoming conversation. Imagine yourself in the conversation, but from the your own, immersed perspective, observing you and the social encounter as it unfolds. From that perspective, imagine what your thoughts and feelings will be like. Imagine how the conversation will go.

After you imagine what the experience will be like, spend a few minutes writing about **what** will happen during this conversation. Try to imagine yourself in the conversation, but from your own perspective, observing yourself and the social encounter as it unfolds. From that perspective, imagine **what** your thoughts and feelings will be like. Imagine how the conversation will go.

Spend the next 2 minutes writing and analyzing **why** you will feel the way you imagine you'll feel and **why** the conversation will go the way you envision it going. Please remember to stay in the immersed perspective as you do this.

*Let me give you an example. Let's say I am anticipating sitting in front of my computer and writing a term paper. So, if I were doing this self-reflection exercise for that example, I would imagine myself in front of my computer, keeping that scene very much in mind, as I reflect on what I (or "Dan") would be thinking about and feeling, what "Dan" would be experiencing and doing, how "Dan" would be behaving in those moments from "Dan's" perspective as the event was unfolding. Then, from that perspective, I would try to analyze why I/Dan would be experiencing those things – in other words, why I/Dan would be feeling, thinking, and behaving like that.*

## Appendix J

### Instructions for reflecting on the *upcoming social task* from the *distanced perspective*

In a moment, while viewing your reflection in the mirror, try to imagine the details of the upcoming conversation. Imagine yourself in the conversation, but from the perspective of a “fly on the wall” observing you and the social encounter as it unfolds. From the perspective of that fly, imagine what your thoughts and feelings will be like. Imagine how the conversation will go.

After you imagine the experience, I will ask you to spend a few minutes writing about **what** will happen during this conversation. Try to imagine yourself in the conversation, but from the perspective of a “fly on the wall” observing you and the social encounter as it unfolds. From the perspective of that fly, imagine **what** your thoughts and feelings will be like. Imagine how the conversation will go.

Finally, I will ask you to spend a few more minutes writing and analyzing **why** you will feel the way you imagine you’ll feel and **why** the conversation will go the way you envision it going. Please remember to stay in the perspective of a “fly on the wall” as you do this.

*Let me give you an example. Let’s say I am anticipating sitting in front of my computer and writing a term paper. So, if I were doing this self-reflection exercise for that example, I would imagine myself in front of my computer and then, keeping that scene very much in mind, as I reflect on what I (or “Dan”) would be thinking about and feeling, what “Dan” would be experiencing and doing, how “Dan” would be behaving in those moments, from the perspective of a more distant “fly on the wall” who may have observe Dan as he goes through this experience. Then, from that perspective, I would try to analyze why I/Dan would be experiencing those things – in other words, why I/Dan would be feeling, thinking, and behaving like that.*

## Appendix K

### Anticipation Question

**How much are you looking forward to the upcoming conversation? Please provide your rating by circling a number on the scale below:**

Not at all                      Somewhat                      Very much

1-----2-----3-----4-----5-----6-----7

## Willingness Question

**How much are you willing to participate in the upcoming conversation? Please provide your rating by circling a number on the scale below:**

Not at all                      Somewhat                      Very much

1-----2-----3-----4-----5-----6-----7